FOR IMMEDIATE RELEASE

December 7, 2007

DEQ Extends Comment Period on Proposed Lake Helena-Valley Drive Gravel Pit

Helena – Due to requests from the public, the Montana Department of Environmental Quality (DEQ) has extended the public comment period on the application from Helena Sand and Gravel to operate a gravel pit between Lake Helena Drive and Valley Drive. The comment period is being extending until Friday, January 4, 2008.

In addition, the DEQ will be holding an informational meeting on Tuesday, December 18, 2007 in the Old Gym at the Eastgate Elementary School, 4010 Gradestake, in East Helena. The meeting will run from 6:30 until 9:00 P.M. DEQ staff will provide information and answer questions about the application and Environmental Assessment.

The proposed 111.5 acre gravel pit would be located approximately 0.6 miles south of Canyon Ferry Road. Access would be off Lake Helena Drive. The company is proposing to mine, crush, wash, screen, and haul sand and gravel, and operate a concrete batch plant and asphalt plant. Helena Sand and Gravel proposes to remove approximately 6.3 million cubic yards of sand and gravel from the site over the next 10 years. The site would be reclaimed by regrading, resoiling, and seeding the site with a mixture of pasture grasses. Reclamation would be completed in November of 2017.

Copies of the application, maps, and other relevant documents as well as additional copies of the Environmental Assessment are available from the DEQ at the 1520 East 6th Ave, Helena, MT, 59601. The environmental assessment will also be available on the DEQ web page at http://deq.mt.gov/ea/opencut.asp.

The DEQ will accept written comments on this proposal until 5:00 P.M. on January 4, 2008. Please mail or fax your comments to DEQ Industrial and Energy Minerals Bureau, PO Box 200901, Helena, MT 59620-0901 or e-mail to Chris Cronin at ccronin@mt.gov.

The DEQ will make reasonable accommodations for persons with disabilities who wish to participate in the meeting. If you require an accommodation, please contact Lisa Peterson at 406-444-2929. For more information about the application, please contact Chris Cronin at (406) 444-4970.
Enclosure

DRAFT ENVIRONMENTAL ASSESSMENT

Project Name: Lake Helena-Valley Drive Pit **Proposed Implementation Date:** January 2008

Proponent: Helena Sand and Gravel

Type and Purpose of Proposed Action:

Helena Sand and Gravel (HS&G) has applied to the Montana Department of Environmental Quality (DEQ) for a permit to develop an aggregate mining operation that would excavate, crush, screen, stockpile and transport up to 6.3 million cubic yards of material over 10 years.

Description of Proposed Action:

Access: The proposed permit area would be located on HS&G land between Valley Drive and Lake Helena Drive, south of Canyon Ferry Drive, approximately 1 mile north of East Helena. The access road to the site would extend west from Lake Helena Drive at a location approximately 0.6 miles south of Canyon Ferry Road and 1,500 feet south of the Helena Valley Irrigation District canal (Figure 1). The access road off Lake Helena Drive would be paved within two years of commencement of asphalt batching activities (Figure 2).

Proposed operations: The proposed permit area would encompass 111.5 acres (Figure 2). HS&G proposes to mine to a depth of approximately 40 feet beginning in the winter of 2008, removing 6.3 million cubic yards of material over 10 years. Operations would commence near the center of the property where topsoil would be salvaged and stockpiled from approximately 20 to 25 acres and placed in a berm along the Valley Drive side of the permit area. The crusher would be set up in the stripped area. Sand, gravel and cobbles would be excavated to a depth of 15 feet and transported to the crusher in wheeled loaders. This would create a pad 15 feet below the ground surface on which to place the crusher, a concrete batch plant, and an asphalt hot plant. Placement of the crusher and asphalt hot plant(s) would be accomplished throughout the winter of the first year of operation (Figure 2).

During the second year a concrete batch plant would be installed at the site and a wash plant would be added to the crusher equipment setup, prior to using the concrete batch plant. Two unlined, 80,000-square-foot settling ponds would be constructed to allow sediment to settle out so that water could be reused for production operations. One settling pond would be initially excavated and the second would be excavated when the first fills with sediment to a depth of 10 feet below the ground surface. Other facilities would include a scale house/office, grizzly screen, pug mill, and conveying equipment as necessary (Figure 2).

Mining would progress to a depth of 40 feet and would remain at least 5 feet above seasonal high ground water and 1,000 feet from the property boundaries. Approximately 15 to 18 acres would be disturbed each succeeding year. As mining moved around the property, the portable primary feeder and jaw crusher would be relocated near the point of excavation. An overland conveyor belt would transport the material from the jaw crusher to the plant production area where secondary crushing would occur. The jaw crusher would be insulated to reduce operational noise and polyurethane/rubber screening fabric would be used on the screening plant to reduce noise generated by aggregate particles coming into contact with the screens.

Truck traffic: Traffic in and out of the pit area would be initially restricted to a single access point on Lake Helena Drive. Approximately 20,000 off-site deliveries of product would be made each year. Typical commercial traffic includes 10-cubic yard mixers, 12-cubic yard dump trucks and 24-cubic yard dump truck/trailer combinations.

Hours of operation: Normal hours of operation for the crusher would be from 4 PM to 2 AM and from 2

AM to 12 noon (double-shift) Monday through Friday. This includes mining and processing, but not maintenance and hauling to existing stockpiles. Equipment maintenance would be scheduled for off hours, for safety reasons. Typical hours for the concrete batch plant and asphalt hot plant would be from 5 AM to 8 PM Monday through Friday. However, project demands may require commencement of plant operations earlier in the morning or later in the evening, as may be necessary to comply with concrete placement standards or apply asphalt paving when traffic volume is lower for safety reasons.

Water for operations would be generated or used from the following sources: surface water from the Stockburger Ditch, storm water runoff, recycled gravel wash water and well water.

Fuel and asphalt liquids would be stored in aboveground dual-walled steel storage tanks. These tanks would be placed in secondary concrete containment enclosures. Temporary storage tanks used during the portable crushing/screening operations would be placed in secondary containment pits lined with sheet plastic. HS&G has prepared a draft Spill, Prevention, Control and Countermeasures Plan (SPCC) that addresses handling solvents, wash-water, and wastes associated with the asphalt plant, concrete plant and truck use.

Some concrete and asphalt material may be temporarily stored on site pending recycling and reuse.

Topsoil salvaged as the facility is developed would be placed to form a twelve feet high topsoil berm along the Valley Drive side of the permit area (Figure 2). The berm would be seeded with a grass seed mix. Berms along other segments of the permit boundary would be constructed where necessary to shield other neighbors. The property boundary is currently fenced and cattle guards would be placed on the access road to prevent livestock access. Trees and shrubs would be planted as necessary along the perimeter of the property in sections where they would help to mitigate visual and sound impacts on neighboring residences. A drip irrigation system would be installed to provide necessary water and temporary fencing would be used to protect the trees and seeded areas for at least two growing seasons.

Reclamation: The site would be reclaimed to pasture land for grazing livestock with a wheatgrass seed mix. The reclaimed surface would be sloped from the undisturbed surrounding ground into the pasture bowl to a depth of 40 feet. The reclaimed side slopes would be at a gradient of 3:1 or flatter.

HS&G would alleviate compaction by ripping compacted surfaces and replaced overburden to a depth of at least 12 inches before resoiling. Topsoil would be disked prior to seeding. The office/facilities area and all internal roads would be reclaimed by removing surfacing material, ripping, scarifying, topsoiling and seeding. Fertilizer would be applied at the time of seeding. No mulch would be used.

Location: SE ¼ and the E ¼ of the SW ¼, NW ¼ of the SW ¼ and the S ½ of the NW ¼ of Section 19, Township 10 North, Range 2 West

County: Lewis and Clark

Scoping Comments and Concerns:

Aesthetics
Dust and Air Quality
Hours Of Operation
Noise and Light
Property Values
Traffic Safety and Highway Impacts
Water Table and Reclaimed Use

1. **Aesthetics (EA Section 8)**

COMMENT: A new industrial operation would create a negative visual impact to residents in the area.

RESPONSE: Restrictions placed on the permit such as hours of operation, visual screening, limitations on crushers, and required reclamation in areas no longer needed for mining would reduce the impact of this operation. While some impacts cannot be avoided, restrictions placed on the permit would make reasonable reductions in the impact to local aesthetics. The permit area is surrounded by a 1,000-foot buffer zone to minimize potential impacts to adjacent roads and residences. The crusher, concrete batch plant and the asphalt hot plant would be placed on a pad set 15 feet below the surrounding elevation to reduce aesthetic impacts. A twelve feet high topsoil berm would be constructed along the Valley Drive side of the permit area using topsoil salvaged as the site is developed. The berm would be planted with trees and shrub, and watered using a drip irrigation system. Berms along other segments of the permit boundary would be constructed where necessary to shield other neighbors. In addition, trees and shrubs would be planted along other segments of the property perimeter where they would help to mitigate visual and sound impacts on neighboring residences. Temporary fencing would be used to protect plantings and seeded areas through at least two growing seasons. The property boundary is currently fenced and cattle guards would be placed on the access road to prevent any livestock access.

2. **Dust and Air Quality (EA Section 3)**

COMMENT: East Helena is an EPA-designated non-attainment area for lead and sulfur dioxide. The proposed pit would be a new air pollution source that could degrade air quality and visuals by increased dust from the crusher, material transport equipment and roads within the permit area. The asphalt batch plant would discharge asphalt hydrocarbons to the air and degrade air quality.

RESPONSE: The non-attainment designation for East Helena has been traced to the ASARCO lead smelter, American Chemet facility, road dust, and automobile emissions. The operations that would occur at the proposed Lake Helena Valley Drive (LHVD) Pit could contribute sulfur dioxide, volatile organic compounds (VOCs) and particulate matter to the local airshed. Additionally, the proposed permit area is located within the administrative boundaries of the East Helena Superfund site related to the ASARCO lead smelting operations. Surface soils in this area represent a potential source of metals-impacted dust. HS&G would be required by the EPA to comply with a surface soil sampling and analysis plan developed specifically for the proposed site prior to any disturbance. At a recent meeting with EPA, DEQ, City of East Helena and Lewis and Clark County officials, soil sampling along drainage ways was discussed. Keeping the soils moist during salvage operations and on the berms until vegetation was established was also recommended as a means to keep dust from blowing. If these recommendations are included in the final plans agreed to between HS&G and the agencies associated with the East Helena Superfund site, then they would be incorporated into HS&G's operating plan for its LHVD Pit.

The operator of any crushing operation, asphalt plant or concrete plant must comply with the state air quality standards. These standards would include the regulation of particulate emissions, nitrogen oxides, carbon monoxide, sulfur dioxide and VOCs. In or within 10 kilometers of a non-attainment area, additional operational requirements such as best available control technology and reasonably available control measures are applied to further reduce the pollutant impacts of particulate and smoke. Such limitations reduce opacity limits to as low as 5 percent. Additionally, modeling is conducted on such sources operating in

these areas during the winter months, with further restrictions being imposed on facility production and hours of operation, if necessary.

DEQ will respond to complaints about excessive dust and smoke. DEQ will also enforce compliance with the requirements to the permits that it issues. Failure to comply with required permits issued by DEQ could result in enforcement actions and possible penalties under one or more statutes. DEQ will also abide by federal guidelines and standards to ensure the protection of human health and welfare. However, DEQ will not establish air quality regulations for which there is no federal guidance. The air quality permits issued by DEQ require using equipment control devices, as well as opacity limitations and reasonable precautions to achieve the appropriate emissions standards.

Any effects of dust in combination with smoke and exhaust should be mitigated, because dust control measures such as watering and spray bars must be in place during operation.

3. **Hours of Operation (EA Section 8)**

COMMENT: The hours of operation are not appropriate for a residential area.

RESPONSE: The permit area containing the crusher, asphalt plant and concrete plant will have a 1,000-foot buffer between it and the nearest residential area, and these facilities will be set on a pad located 15 feet below the surrounding land surface. A vegetated berm along the Valley Drive side of the permit area and additional plantings will be used to further mitigate visual and sound impacts on neighboring residences. HS&G would use industry-proven insulation and rubber screens to reduce noise from their operation. Noise from trucks entering and exiting the permit area may disturb residents in night-time hours.

4. **Noise and Light (EA Section 8)**

COMMENT: Noise and light from the equipment and trucks is disrupting to nearby residents.

RESPONSE: The Opencut Mining Act does not include specific standards for noise or light levels. However, the Act does require that noise and visual impacts on residential areas should be minimized to the degree practicable through berms, vegetation screens, and reasonable limits on hours of operation, [82-4-434(2)(o), MCA]. As discussed above in comment #3, the crusher, asphalt plant and concrete plant will be set 15 feet below grade with at least 1,000 feet of separation from the nearest residences. The berm along the Valley Drive side of the permit area and additional plantings will further mitigate visual and sound impacts. Berms along other segments of the permit boundary would be constructed where necessary to shield other neighbors. Use of insulation and rubber screens on equipment will also reduce noise. The use of downward facing lights would further reduce the impacts from nighttime lights.

5. **Property Values (EA Section 15)**

COMMENT: The operation will decrease property values in the surrounding residential area.

RESPONSE: Sale or market value of adjacent property has not been shown to be negatively affected by the presence of a gravel pit and associated operations (Rygg 1998). In any case, under the Opencut Mining Act DEQ has no authority or jurisdiction over property value issues.

The Legislature has specifically limited DEQ's authority to issues relating to taxable value. Under Montana law, an administrative agency, such as DEQ, has only those powers granted to it by the Legislature through enactment of statutes. The Legislature has given DEQ two means of mitigating the effects of gravel operations on adjacent property. First, DEQ has authority to protect air quality; to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation; and to otherwise prevent significant physical harm to adjacent land. Second, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and revegetated. In a recent study of gravel operations in Montana, an Appraisal Institute (MAI) appraiser concluded that these measures are effective in preventing decrease in taxable value of lands surrounding gravel pits (Rygg 1998).

If homeowners believe their property values are decreased because of a gravel operation, they may appeal to the County and the State for tax adjustment. Impact-mitigating restrictions such as hours of operations, dust control, water testing and visual berms on operations of this nature have been successful elsewhere in the state. Formal tax appeals have not generated a reduction in taxable values of land affected by aggregate mining.

6. **Traffic Safety and Highway Impacts (EA Section 11)**

COMMENT: Truck traffic will increase and there will be an increased danger to parents and students traveling to the R.H. Radley and Eastgate schools located south of the proposed pit off of Valley Drive and Lake Helena Drive, respectively (Figure 1). Lake Helena Drive and Valley Drive are not suitable for truck traffic and need to be upgraded.

RESPONSE: The primary truck route would be Canyon Ferry Drive to the access on Lake Helena Drive. Occasional trucks would go south on Valley Drive or Lake Helena Drive into East Helena. These trucks would be on the roads in residential areas and near the R.H. Radley and Eastgate Schools. There is already an existing danger to pedestrians, cyclists and school children walking/riding on these roads to and from school. Occasional truck traffic would slightly increase the danger to people walking/riding on Valley Drive and Lake Helena Drive.

Impacts on state highways such as Lake Helena Drive where gravel trucks enter from privately-owned gravel pits are the responsibility of the operator and the Montana Department of Transportation. The operator must follow all safety procedures set by the Montana Department of Transportation, including locating the approach in a safe place. This may include signs, speed reduction, flagging and traffic control, if necessary, for major projects. Although heavy truck traffic would slightly increase the danger to pedestrians and bicyclists, the trucks are entitled to use the roadway as long as they obey speed and load limit laws. Placement of stop signs at the exit points from the pit would reduce the danger of vehicle accidents.

The use of compression breaks by trucks slowing down is not under the control of HS&G until they enter the permit area. HS&G must clean spilled gravel products from the highway in the immediate vicinity of the pit approach, although trucks from other projects also use this portion of Lake Helena Drive.

7. **Water Table and Reclaimed Use (EA Section 2)**

COMMENT: Where would the water used by the facility come from?

RESPONSE: The gravel operation would use water for washing gravel, concrete mixing and dust control. The water would be supplied from the four existing groundwater wells on the property and from a surface water right on Prickly Pear Creek via the Stockburger Ditch (Figure 1). Specified water uses assigned to the water rights for these sources would have to be changed from irrigation to industrial. HS&G would have to apply for these changes with the Department of Natural Resources and Conservation (DNRC). Water would be recycled by discharging gravel wash water into the settling ponds. The fine material would settle out and the clean water would be pumped back in for facility uses.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactable or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?	Existing Environment: The proposed permit area is located in an erosionally-smoothed and reworked alluvial surface in the Helena Valley. The overburden on the site is mapped as two similar units: the Attewan-Nipt and Nipt-Attewan complexes (SSURGO 2007). Typically, these soil complexes have loam to gravelly loam to 5" depth, clay loam to gravelly clay loam to 8" depth and extremely gravelly sand to very gravelly loam to 13". Field sampling indicates mine-area soil depths of 3" to 5" which is shallower than the typical profile. These soil types would accommodate salvage and redistribution for reclamation in the future. Material underlying these soils consists of alluvial sands, gravels and cobbles. *Lead-impacted soils:* The proposed permit area is located within the administrative boundaries of the East Helena Superfund site (EHSS) (Brown pers. comm. 2007). Lands within the site may be impacted with lead and arsenic as the result of historic lead smelting operations at the former ASARCO smelting facility in East Helena. The proposed permit area is located within an area of concern due to its proximity to the former smelter and former flood irrigation of the site using water from Prickly Pear Creek (Brown per comm. 2007). Soil at the site may have been impacted by aerial deposition of materials release from the smelter, or by metals dissolved in the irrigation water obtained from Prickly Pear Creek. Aerially deposited particles may have been reworked and concentrated locally by the flood irrigation process. Two four-point composite samples collected by HS&G in 2006 contained lead concentrations of 80 parts per million (ppm) and 120 ppm, both of which are below the EPA action limit of 500 ppm. A copy of the analytical results is included as **Appendix A**. Impacts from Proposed Action: Topsoil would be salvaged and stockpiled as mining progresses and would be placed in a berm located on the Valley Drive side of the permit area. Berms along other segments of the permit boundary would be constructed where necessary to shield other neighbors. The berms would be vegetated to minimize the loss of soil. Approximately 6.3 million cubic yards of alluvial material would be removed from the 111.5 acre permit area over 10 years. *Lead-impacted soils:* According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to contact the EPA to develop a Sampling and Analysis Plan under their supervision prior to a change in land use. HS&G

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	would develop a Sampling and Analysis Plan (SAP) with the DEQ, Lewis & Clark County and EPA that would determine whether concentrations of lead and/or arsenic are present within the proposed permit area above the action limit. If concentrations of lead and arsenic are below action levels, disturbance would be allowed to proceed. If concentrations are above action levels, HS&G, DEQ, Lewis & Clark County and EPA would determine whether additional sampling and analysis and remedial action must be completed prior to disturbance (Brown pers. comm. 2007). However, no soil would leave the site as all soil would be salvaged and used for reclamation. *Reclamation:* The site would be reclaimed to pasture land for grazing livestock with a wheatgrass seed mix. The reclaimed surface would be sloped from the undisturbed surrounding ground into the pasture bowl to a depth of 40 feet. The reclaimed side slopes would be at a gradient of 3:1 or flatter. Backslopes would be scarified or disked if needed and topsoil would be disked prior to seeding. The office/facilities area and all internal roads would be reclaimed by removing surfacing material, ripping, scarifying, topsoiling and seeding. Fertilizer would be applied at the time of seeding. No mulch would be used. Cumulative Impacts: No cumulative impacts were identified as a result of the Proposed Action.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	Existing Environment: There are no permanent surface water sources present within the proposed permit area or within 1,000 feet of the proposed permit area. The closest permanent surface water feature is Prickly Pear Creek, located approximately 1¼ mile to the southwest of the proposed permit area. The Helena Valley Canal, a seasonal irrigation ditch, runs along the north boundary of the HS&G property approximately 1,000 feet from the proposed permit area. Another seasonal ditch, the Stockburger Ditch, transports water from Prickly Pear Creek and runs adjacent to the Helena Valley Canal (Figure 1). According to USGS topographic maps and aerial photos, a small channel extends from the vicinity of East Helena north to the Helena Valley Canal and ditch. Prickly Pear Creek has been impaired by lead and arsenic as a result of the ASARCO smelting operation and mining upstream of the smelter. The proposed permit area is identified as an area of concern because it has utilized flood irrigation waters from Prickly Pear Creek in the past (Brown pers. comm. 2007). According to GWIC (2007) and information obtained from HS&G (2007), there are four wells located within the proposed permit area or within 1,000 feet of the proposed permit area. Three of the four wells were gauged during seasonal low water (February 2007). The static water level in these wells ranged from approximately 45 feet below the ground surface (bgs) to 46 feet bgs. The proposed permit area is in DNRC Basin 41I (Missouri River above Holter Dam). HS&G currently holds two water rights for this property. The water rights are for surface water from Prickly Pear Creek via a

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	headgate on the Stockburger Ditch. The two water rights would allow HS&G to divert up to 5.96 cubic feet per second (cfs) out of the Stockburger Ditch during periods of high water in Prickly Pear Creek. After high water flows have receded, HS&G could only divert 1.60 cfs from the ditch. The current water rights would allow HS&G to use water from Prickly Pear Creek from April 15 to October 15 for the purposes of flood irrigation (DNRC WQRS 2007). Impacts from Proposed Action: HS&G (2007a) states that excavation is proposed to extend to 40 feet below ground surface (bgs), but that excavation will not occur within 5 feet of the water table. Therefore, based on on-site seasonal low water groundwater measurements in February 2007 (45-46 feet bgs), it is likely that monitoring of the seasonal high water table would indicate that the excavation could not extend to 40 feet bgs during seasonal high water. The concrete batch plant would use approximately 50 gallons per minute (gpm) for a maximum of 12 hours/day, 260 days/year. The crusher/wash plant would use approximately 1,950 gpm for a maximum of 20 hours/day, 300 days/year. Storm water would be controlled and contained internally. Gravel wash water and storm water would be recycled by discharging it into two, unlined, 80,000 square feet settling ponds. One settling pond would be initially excavated and the second would be excavated when the first fills with sediment to a depth of 10 feet below the ground surface. The fine sediments would settle out and clean water would either infiltrate back into the subsurface or would be recaptured for reuse in the gravel wash operations. Based on a DNRC evaporation loss estimate of 3.2 acre-feet of water per year per surface acre of pond (Schultz pers. comm. 2007), there would be an estimated evaporative loss of 13 acre-feet of water per year from the settling ponds. In comparison, the estimated evapotranspiration loss that would occur from 111 acres of pasture grass would be 203 acre-feet per year, based on the NRCS estimate of 1.8 acre-feet of evapotranspiration per acre (NRCS 1993). HS&G would use water for the proposed operation from four on-site wells. The amount of water pumped from each well, and any additional well(s) installed in the future, could not exceed 35 gpm or 10 acre/feet annually. Additionally, the total pumping rate cannot exceed these values for multiple wells if they are manifold into the same system. An additional well may be necessary to provide adequate water supply. HS&G would need a groundwater water right permit if the quantity of water pumped from the well would exceed 35 gpm and 10 acre-feet per year. Because Basin 41I is a “closed basin”, HS&G would need to apply to change an existing water right to mitigate for any new use that would exceed the 35 gpm / 10 ac-ft limitations. HS&G would also need to apply for a change of designated use from irrigation to industrial use. The current surface water rights would allow HS&G to use water from Prickly Pear Creek for the purposes of flood irrigation. HS&G would need to apply for a change to the designated use of the surface water

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	to use it in their operations. The water in Prickly Pear Creek is impaired by heavy metals from smelting activities and upstream mining (CWAIC 2007). This water is utilized by many water users in the East Helena Valley. The use of Prickly Pear Creek water for washing and dust control would not cause a decrease in water quality on the proposed permit area or surrounding area. A Spill, Prevention, Control and Countermeasures (SPCC) Plan has been completed for the proposed permit area. Seven above ground storage tanks (ASTs) would be used to store fuel and asphaltic cement. These tanks would be secondarily-contained within concrete enclosures. Fuel storage utilized in portable crushing/screening operations would be placed in plastic-lined temporary secondary containment pits. Chemicals used in the concrete plant would be stored in manufacturer-supplied plastic tanks. These tanks would be placed in a supply room with a concrete slab floor and foundation walls. Asphalt hot mix that may be returned to the proposed permit area would be placed onto a small stockpile before being crushed into a recycled asphalt product. <u>Impacts from Agency-Mitigated Alternative:</u> Since the seasonal high water table cannot be confirmed at 40 feet bgs, HS&G would be required to monitor groundwater wells monthly for the first year, and quarterly thereafter to get a better definition of the seasonal high and low water tables. This would better define the depth of mining. <u>Cumulative Impacts:</u> The Red Fox subdivision is proposed for the northwest corner of section 20 adjacent to the northeast corner of the HS&G property (Figure 1). The subdivision is in the Lewis & Clark County approval process. The Red Fox subdivision would add 133 lots on 166 acres (Burke pers. comm. 2007). The Proposed Action, in conjunction with the development of the Red Fox subdivision, would result in a cumulative increase in water use in the East Helena Valley.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	<u>Existing Environment:</u> The predominant wind direction in the area is to the east and north (Brown pers. comm. 2007). The site is not located within a Class I Airshed. East Helena is an EPA-designated non-attainment area for lead and sulfur dioxide. *Lead-impacted dust:* The proposed permit area is located within the administrative boundaries of the EHSS (Brown pers. comm. 2007). Lands within the site may be impacted with lead and arsenic as the result of historic lead smelting operations at the former ASARCO smelting facility in East Helena. The proposed permit area is located within an area of concern due to its proximity to the former smelter and the former use of flood irrigation from Prickly Pear Creek on the proposed site (Brown per comm. 2007). Two four-point composite samples collected by HS&G in 2006 contained lead concentrations of 80 parts per million (ppm) and 120 ppm, both of which are below the EPA action limit of 500 ppm. A copy of the analytical results is

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	included as **Appendix A**. Impacts from Proposed Action: Dozers, loaders, crushers and trucking equipment typically cause dusty conditions in disturbed soil sites, and operating equipment typically emits odors that may be offensive to some people. However, crushers and asphalt plants are regulated for dust and smoke emissions, and the equipment used must be tested and approved by DEQ. Spray bars would be used on the crushers and transfer points, and water is applied within the site as needed to reduce dust. The mine area and internal roads would be watered or have dust suppressant applied by truck. The main access road would be paved where it enters the main highway. The operations that would occur at the proposed LHVD Pit could contribute sulfur dioxide, volatile organic compounds (VOCs) and particulate matter to the local airshed. However, the operator of any crushing operation, asphalt plant or concrete plant must comply with the state air quality standards. These standards would include the regulation of particulate emissions, nitrogen oxides, carbon monoxide, sulfur dioxide and VOCs. In or within 10 kilometers of a non-attainment area, additional operational requirements such as best available control technology and reasonably available control measures are applied to further reduce the pollutant impacts of particulate and smoke. Such limitations reduce opacity limits to as low as 5 percent. Additionally, modeling is conducted on such sources operating in these areas during the winter months, with further restrictions being imposed on facility production and hours of operation, if necessary. DEQ will respond to complaints about excessive dust and smoke. DEQ will also enforce compliance with the requirements to the permits that it issues. Failure to comply with required permits issued by DEQ could result in enforcement actions and possible penalties under one or more statutes. DEQ will also abide by federal guidelines and standards to ensure the protection of human health and welfare. However, DEQ will not establish air quality regulations for which there is no federal guidance. *Lead-impacted dust:* According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to contact the EPA to develop a Sampling and Analysis Plan prior to a change in land use. HS&G would develop a Sampling and Analysis Plan with the DEQ, Lewis & Clark County and EPA that would determine whether concentrations of lead and/or arsenic are present within the proposed permit area above the action limit. If concentrations of lead and arsenic are below action levels, disturbance would be allowed to proceed. If concentrations are above action levels, HS&G, DEQ, Lewis & Clark County and EPA would determine whether additional sampling and analysis and remedial action must be completed prior to disturbance (Brown pers. comm. 2007). Any recommendations and soil sampling, salvage and revegetation requirements would be incorporated into HS&G's operating plan for its LHVD Pit.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	Cumulative Impacts: There may be an increase in wind-borne dust to the local area as a result of the Proposed Action. Historic use of the agricultural land in the area by plows, discs, seed drills, swathers, combines, balers, etc. have always contributed to the dusty conditions in the area during summer months, and there are no requirements for farmers and ranchers to control and reduce dust and odor emissions created by these activities. Other aggregate mining permit areas within two miles of the proposed LHVD Pit include the active HS&G Canyon Ferry Drive Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). According to Jim Turner of HS&G, the Canyon Ferry Drive pit will cease asphalt and concrete batch operations in 2008. The Big Sky Ready Mix pit will continue road mix mining and crushing operations for approximately 4 more years. The Foster pit would not operate until the proposed LHVD Pit ceased operations. Therefore, there may be a short-term cumulative impact to air quality while the LHVD Pit operates with the Canyon Ferry Drive pit and Big Sky Ready Mix pit until 2008 and 2012, respectively.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present? Weed control plan?	Existing Environment: The proposed permit area is vegetated with a pasture community of crested wheatgrass and alfalfa. Vegetative cover is sparse with a minor cover of noxious weeds including spotted knapweed, Canada thistle, leafy spurge and dalmatian toadflax. There are no threatened, endangered or sensitive (TES) species that are known to occupy, or have the potential to occupy, the proposed permit area (MNHP 2007). Impacts from the Proposed Action: Trees and shrubs would be planted along the perimeter of the property in sections where they would help to mitigate visual and sound impacts on neighboring residences. A drip irrigation system would be installed to provide necessary water and temporary fencing would be used to protect the trees and seeded areas for at least two growing seasons. The Proposed Action would remove the current vegetative community but mined areas would be seeded to a pasture mix compatible with the post mine land use. The species composition would then differ from the current, introduced species, but would provide comparable cover and production for pasture. HS&G has submitted a Noxious Weed Control Plan for the proposed permit area (HS&G 2007c). The Lewis & Clark Weed Coordinator stated that HS&G would be in compliance with weed district requirements for the proposed LHVD operation. Cumulative Impacts: There would be no cumulative impacts to vegetation as a result of the Proposed Action.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	Existing Environment: The proposed permit area is likely used by large ungulate game species such as white-tailed deer and antelope. However, the pasture cover on the proposed permit area is sparse relative to the agricultural lands that surround the HS&G property and would not provide as high of quality forage for these species. The

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	proposed permit area supports populations of small burrowing mammals and insects, which in turn provide a source of prey for song birds and raptors. A discussion of TES wildlife species is provided below in **Section 6**. Impacts from Proposed Action: The Proposed Action would remove the existing cover and forage until 2017. However, suitable and improved cover and forage is available on adjacent properties surrounding the proposed permit area and in the region. Therefore, there would be no significant impact to terrestrial, avian and aquatic life and habitats. Cumulative Impacts: There would be no cumulative impacts to terrestrial, avian and aquatic life and habitats.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	The Montana Natural Heritage Program (MNHP) did not identify any TES wildlife species that have the potential to inhabit or use the proposed permit area (MNHP 2007).
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	Existing Environment: There was one cultural resource site identified within the boundary of the HS&G property. The Helena Valley Canal is located on the north boundary of the property. Impacts from Proposed Action: According to the State Historic Preservation Office (SHPO), there is a low likelihood that cultural sites could be impacted by the Proposed Action. No additional cultural resource inventory is necessary at this time (Murdo 2007). However, if significant resources were found during excavation or construction, the operation would be routed around the site of discovery for a reasonable time until salvage could be conducted. The State Historic Preservation Office would be promptly notified. Cumulative Effects: There would be no cumulative impact to historical and archaeological sites as a result of the Proposed Action.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	Existing Environment: The proposed permit area is currently pasture land with no structures. There is residential development to the north, west, southeast and southwest of the HS&G property. Vacant agricultural land lies to the south and east. Impacts from Proposed Action: The proposed operation would have an adverse effect on aesthetics. The site would be visible from residential neighborhoods, Lake Helena Drive and Valley Drive. According to HS&G, on-site noise levels generated by operating equipment at the pit would generally be within the range of 60 to 90 decibels, but decrease with distance. As a comparison, sound levels for ordinary activities such as close conversation and music from a radio are 60 and 70 decibels, respectively. Levels above 90 decibels are severe, prolonged exposure to which can lead to hearing loss. Loaders and truck traffic

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	hauling to various projects also produce noise. Additionally, night-time light would be created that might be visible to residences located closest to the operations. Restrictions placed on the permit such as hours of operation, visual screening, limitations on crushers, and required reclamation in areas no longer needed for mining would reduce the impact of this operation. While some impacts cannot be avoided, restrictions placed on the permit would make reasonable reductions in the impact to local aesthetics. The permit area is surrounded by a 1,000-foot buffer zone to minimize potential impacts to adjacent roads and residences. The crusher, concrete batch plant and the asphalt hot plant would be placed on a pad set 15 feet below the surrounding elevation to reduce aesthetic impacts. A twelve feet high topsoil berm would be constructed along the Valley Drive side of the permit area using topsoil salvaged as the site is developed. The berm would be planted with trees and shrub, and watered using a drip irrigation system. Berms along other segments of the permit boundary would be constructed where necessary to shield other neighbors. In addition, trees and shrubs would be planted along other segments of the property perimeter where they would help to mitigate visual and sound impacts on neighboring residences. Temporary fencing would be used to protect plantings and seeded areas through at least two growing seasons. The property boundary is currently fenced and cattle guards would be placed on the access road to prevent any livestock access. *Reclamation:* The site would be reclaimed to pasture land for grazing livestock with a wheatgrass seed mix. The reclaimed surface would be sloped from the undisturbed surrounding ground into the pasture bowl to a depth of 40 feet. The reclaimed side slopes would be at a gradient of 3:1 or flatter. Backslopes would be scarified or disked if needed and topsoil would be disked prior to seeding. The office/facilities area and all internal roads would be reclaimed by removing surfacing material, ripping, scarifying, topsoiling and seeding. Fertilizer would be applied at the time of seeding. <u>Cumulative Impacts:</u> Other aggregate mining permit areas within two miles of the proposed LHVD Pit include the active HS&G Canyon Ferry Drive Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). According to Jim Turner of HS&G, the Canyon Ferry Drive pit will cease asphalt and concrete batch operations in 2008. The Big Sky Ready Mix pit will continue road mix mining and crushing operations for approximately 4 more years. The Foster pit would not operate until the proposed LHVD Pit ceased operations. Therefore, there may be a short-term cumulative impact to air quality while the LHVD Pit operates with the Canyon Ferry Drive pit and Big Sky Ready Mix pit until 2008 and 2012, respectively.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities	The proposed LHVD Pit would result in a slight increase in groundwater consumption as a result of pond evaporation. This would be at least partially offset by reduced evaporation due to the cessation of flood irrigation and reduced evapotranspiration due to the absence of vegetation from areas being mined or used for operational facilities.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
nearby that will affect the project?	Cumulative Impacts: There would be a slight cumulative increase in the amount of water lost to evaporation in the East Helena Valley as a result of the proposed LHVD Pit and the HS&G Canyon Ferry Drive operation's settling ponds.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?	The proposed permit area is located within the administrative boundaries of the East Helena Superfund site (Brown pers. comm. 2007). Further discussion is provided in **Sections 1, 3, 11** and **16**.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	Heavy equipment and operating facilities including scrapers, trucks, loaders, hot plants, and crushers that can create hazards for employees. The operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents. The primary truck route would be Canyon Ferry Drive to the access on Lake Helena Drive. Occasional trucks would go south on Valley Drive or Lake Helena Drive into East Helena. These trucks would be on the roads in residential areas and near the R.H. Radley and Eastgate Schools. There is already an existing danger to pedestrians, cyclists and school children walking/riding on these roads to and from school. Occasional truck traffic would slightly increase the danger to people walking/riding on Valley Drive and Lake Helena Drive. Impacts on state highways such as Lake Helena Drive where gravel trucks enter from privately-owned gravel pits are the responsibility of the operator and the Montana Department of Transportation. The operator must follow all safety procedures set by the Montana Department of Transportation, including locating the approach in a safe place. This may include signs, speed reduction, flagging and traffic control, if necessary, for major projects. Although heavy truck traffic would slightly increase the danger to pedestrians and bicyclists, the trucks are entitled to use the roadway as long as they obey speed and load limit laws. Placement of stop signs at the exit points from the pit would reduce the danger of vehicle accidents. The use of compression breaks by trucks slowing down is not under the control of HS&G until they enter the permit area. HS&G must clean spilled gravel products from the highway in the immediate vicinity of the pit approach, although trucks from other projects also use this portion of Lake Helena Road. *Lead-impacted dust:* According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to contact the EPA to develop a Sampling and Analysis Plan prior to a change in land use. HS&G would develop a Sampling and Analysis Plan (SAP) with the DEQ, Lewis & Clark County and EPA that would determine whether concentrations of lead and/or arsenic are present within the proposed permit area above the action limit. If concentrations of lead and arsenic are below action levels, disturbance

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	would be allowed to proceed. If concentrations are above action levels, HS&G, DEQ, Lewis & Clark County and EPA would determine whether additional sampling and analysis and remedial action must be completed prior to disturbance (Brown pers. comm. 2007). Any recommendations and soil sampling, salvage and revegetation requirements would be incorporated into HS&G's operating plan for its LHVD Pit. Cumulative Impacts: Historic use of the agricultural land in the area by plows, discs, seed drills, swathers, combines, balers, etc. have always contributed to the dusty conditions in the area during summer months, and there are no requirements for farmers and ranchers to control and reduce dust and odor emissions created by these activities. The majority of the East Helena Valley has been impacted to some extent by the former lead smelting operation and associated current East Helena Superfund site. There is already a risk of inhaling lead-impacted surface soil from dust generated by agricultural and industrial activities. The Proposed Action would add an incremental increase to the threat of lead-impacted dust in the valley. The Red Fox subdivision is proposed for the northwest corner of section 20 adjacent to the northeast corner of the HS&G property (Figure 1). The subdivision is in the Lewis & Clark County approval process. The Red Fox subdivision would add 133 lots on 166 acres (Burke pers. comm. 2007). The Proposed Action, in conjunction with the development of the Red Fox subdivision, would result in an increase in traffic in the area.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	Existing Environment: The proposed permit area is currently agricultural land that is fallow. The East Helena Valley is predominantly agricultural and residential in nature. There are two other active aggregate mining operations with a similar scale within two miles of the proposed LHVD Pit. The HS&G Canyon Ferry Drive pit located 1 ¾ miles to the east-northeast and the HS&G Big Sky Ready Mix pit (no asphalt or concrete batching) located one mile to the west of the proposed LHVD Pit. HS&G also has a permit for aggregate mining at their Foster permit location located approximately 1/4 mile to the northeast of the proposed LHVD Pit. According to Jim Turner of HS&G, this operation is not currently active and operations would not be constructed on it until LHVD Pit operations ceased. The current HS&G pit nearby (Figure 1) will cease operations during 2008. If approved, the proposed LHVD Pit would add to aggregate mining operations in the East Helena Valley. It would not reduce agricultural activities because the property is not actively used for agricultural purposes and HS&G has no plans to use the property for agriculture.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	The Proposed Action would not eliminate any jobs. HS&G would initially use staff from its existing Canyon Ferry Drive operation. The potential for the creation of jobs has not been determined at this time.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax	Operating an aggregate mining operation on the proposed permit area would result in an increase in the taxes paid to the county by HS&G. Income generated by HS&G would be taxed accordingly by the State

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
revenue?	and Federal government. However, with the eventual closure of gravel operations at the Canyon Ferry Road site, the net gain in taxes would not be substantial. Property values were considered as part of this EA. There are little real data on this issue, except for a Flathead County study conducted in 1998 entitled, "Gravel Pits: The Effect on Neighborhood Property Values," by Phillip J. Rygg, MAI, Appraisal Research Group, Kalispell, Montana, February 1998. In his review of the study Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division stated: "In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing."
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	Truck traffic would increase on Canyon Ferry Drive, Valley Drive and Lake Helena Drive as a result of the Proposed Action. Approximately 77 truck trips would be made each week, based on an estimate of 20,000 off-site deliveries made each year, five days a week. Upgrades to Canyon Ferry Drive, including widening and improvement of the road base, have been approved by the Montana Department of Transportation but have not been scheduled. According to the Lewis & Clark Planning Department, Valley Drive and Lake Helena Drive are substandard roads for handling truck traffic and would need to be upgraded to handle significant amounts of truck traffic without significant damage (Burke pers. comm. 2007). However, this is a county issue and DEQ has no authority to require HS&G to pave a public road. If the county wishes to have HS&G help cover some of the costs of paving the road, they would have to work out the matter between them outside of this EA and operating permit. <u>Cumulative Impacts:</u> The Red Fox subdivision is proposed for the northwest corner of section 20 adjacent to the northeast corner of the HS&G property (Figure 1). The subdivision is in the review process at Lewis & Clark County. The Red Fox subdivision would add 133 lots on 166 acres. The Proposed Action, in conjunction with the development of the Red Fox subdivision, would result in an increase in traffic in the area.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	The proposed LHVD Pit would be located within the administrative boundaries of the East Helena Superfund site (EHSS). The Superfund site-specific rules of the EHSS dictate that a Sampling and Analysis Plan must be developed prior to a change in land use. HS&G would develop an SAP with the DEQ, Lewis & Clark County and EPA that would determine whether concentrations of lead and/or arsenic are present within the proposed permit area above the action limit. If concentrations of lead and arsenic are below action levels, disturbance would be allowed to proceed. If concentrations are above action levels, HS&G, DEQ, Lewis & Clark County and EPA would determine

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	whether additional sampling and analysis and remedial action must be completed prior to disturbance (Brown pers. comm. 2007). Any recommendations and soil sampling, salvage and revegetation requirements would be incorporated into HS&G's operating plan for its LHVD Pit. Lewis & Clark County does not have zoning.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	There are no wilderness or recreational areas located within or near the proposed LHVD Pit. However, local residents do use Helena Valley Drive to reach Canyon Ferry Road on their way east to Canyon Ferry or west to I-15 and perhaps driving to other recreational areas accessed from the interstate or roads off of Canyon Ferry Road. Development of the LHVD Pit would not prevent the public from using Helena Valley Drive to reach recreational areas around the Helena area.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	The Proposed Action would not result in additional housing in the area.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	The East Helena Valley has both residential and agricultural development. The closest homes to the proposed permit area are 1,000 feet away. There is the potential that night-time operations could disturb residents located the closest to the operation. There are no native communities in the vicinity of the proposed LHVD Pit. There are other commercial properties including gravel extraction operations in the vicinity. Local people would notice a change in the daily operations at the site as topsoil is stripped and placed into berms and gravel is extracted, crushed and placed into stockpiles. This change in land use during the term of the operation could be perceived by some as a disruption of traditional lifestyles.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	The Proposed Action would not result in a shift to any unique quality of the area.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	There were no other social or economic circumstances evaluated as part of this EA.

22. Alternatives Considered:

A. No Action Alternative: An aggregate mining permit would not be issued to HS&G for the proposed LHVD Pit by the DEQ. The land would remain in ownership by HS&G. Future use of the property by HS&G would be unknown and is beyond the scope of this assessment. Gravel consumption is high in this area as a result of increasing population in general and denial of this application would simply move the demand for this gravel and thus any impacts into other nearby gravel pit sources.

B. Proposed Action: An aggregate mining permit would be issued to HS&G for operations as described under **Description of Proposed Action**.

C. Agency-Modified Alternative: An aggregate mining permit would be issued to HS&G with the following mitigations:

1. Any soil sampling, analysis, salvage and revegetation requirements needed to comply with the East Helena Superfund site program would be incorporated into HS&G's operating plan.
2. Groundwater monitoring wells would be monitored monthly for the first year, and quarterly thereafter to get a better definition of the seasonal high and low water tables.

23. Public Involvement, Agencies, Groups or Individuals contacted:

- U.S. EPA
- Montana State Historical Preservation Office
- Montana Natural Heritage Program
- Montana Department of Natural Resources and Conservation
- Montana Department of Environmental Quality, Remediation Division
- City of East Helena
- Lewis & Clark County Department of Health, Lead Education & Abatement Program
- Lewis & Clark County Planning Office
- Lewis & Clark County Water Quality Protection District

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:

- Montana Department of Natural Resources and Conservation – water rights use transfer
- Montana Department of Environmental Quality – air quality permit
- Mine Safety and Health Administration - safety permit

25. Magnitude and Significance of Potential Impacts: The potential impacts related to the general environment are not likely to be significant based on the lack of sensitive or critical vegetation, wildlife or their habitats. Water usage for the proposed operation would not result in a significant decrease of available water supply to the East Helena Valley and water will be recycled on site. Mitigation measures included in the Plan of Operations would reduce visual impacts of the proposed operation. Requirements placed on the proponent by the Opencut Mining Act ensure that impacts due to noise and light are acceptable. DEQ will also abide by federal air guidelines and standards to ensure the protection of human health and welfare.

Potential impacts from lead contaminated soil and the uncertain depth of mining would be mitigated by Agency-Modified Alternatives.

26. Regulatory Impact on Private Property: The analysis conducted in response to the Private Property Assessment Act indicates no impact to the applicant's property rights from discretionary restrictions. The Department does not plan to deny the application nor restrict the use of private property so as to constitute a taking.

27. References:

Brown, Scott (EPA). Personal communication October 3, 2007.

Clean Water Act Information Center (CWAIC). Data accessed at http://deq.mt.gov/CWAIC/default.aspx on October 4, 2007.

Helena Sand & Gravel (HS&G). 2007a. Opencut Permit Application. Submitted to DEQ Opencut Mining Program July 2007.

Helena Sand & Gravel (HS&G). 2007b. Plan of Operation for Lake Helena Drive Pit. Submitted to DEQ Opencut Mining Program July 2007.

Helena Sand & Gravel (HS&G). 2007c. Application for Five-Year Noxious Weed Management Plan for Timber Harvest/Open Pit Mine. Submitted to DEQ Opencut Mining Program March 21, 2007 and approved March 27, 2007.

Montana Department of Natural Resources and Conservation Water Rights Query System (DNRC). Data accessed at http://nris.mt.gov/dnrc/waterrights/default.aspx on September 21, 2007.

Montana Natural Heritage Program (MNHP). Species of Concern Data Report for Section 19 in Township 10 North, Range 2 West. Submitted to Stephanie Lauer, PBS&J on September 5, 2007.

Montana Natural Resources Conservation Service (NRCS). 1993. Montana Irrigation Guide.

Murdo, Damon (SHPO). 2007. Letter to Stephanie Lauer dated September 7, 2007.

Rygg, Philip J. February 1998. Gravel Pits: The Effect on Neighborhood Property Values.

Schultz, Bill (DNRC Water Resources Division). Personal communication September 17, 2007.

Soil Survey Geographic Data (SSURGO). Data accessed at http://maps2.nris.mt.gov/mapper/ on September 19, 2007.

28. Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

29. EA Checklist prepared by:

Stephanie Lauer — Senior Environmental Scientist, PBS&J
Name — Title

Kathy Johnson — Environmental Impact Specialist, DEQ
Name — Title

30. EA Reviewed By:

Chris Cronin — Opencut Program Manager, DEQ
Name — Title

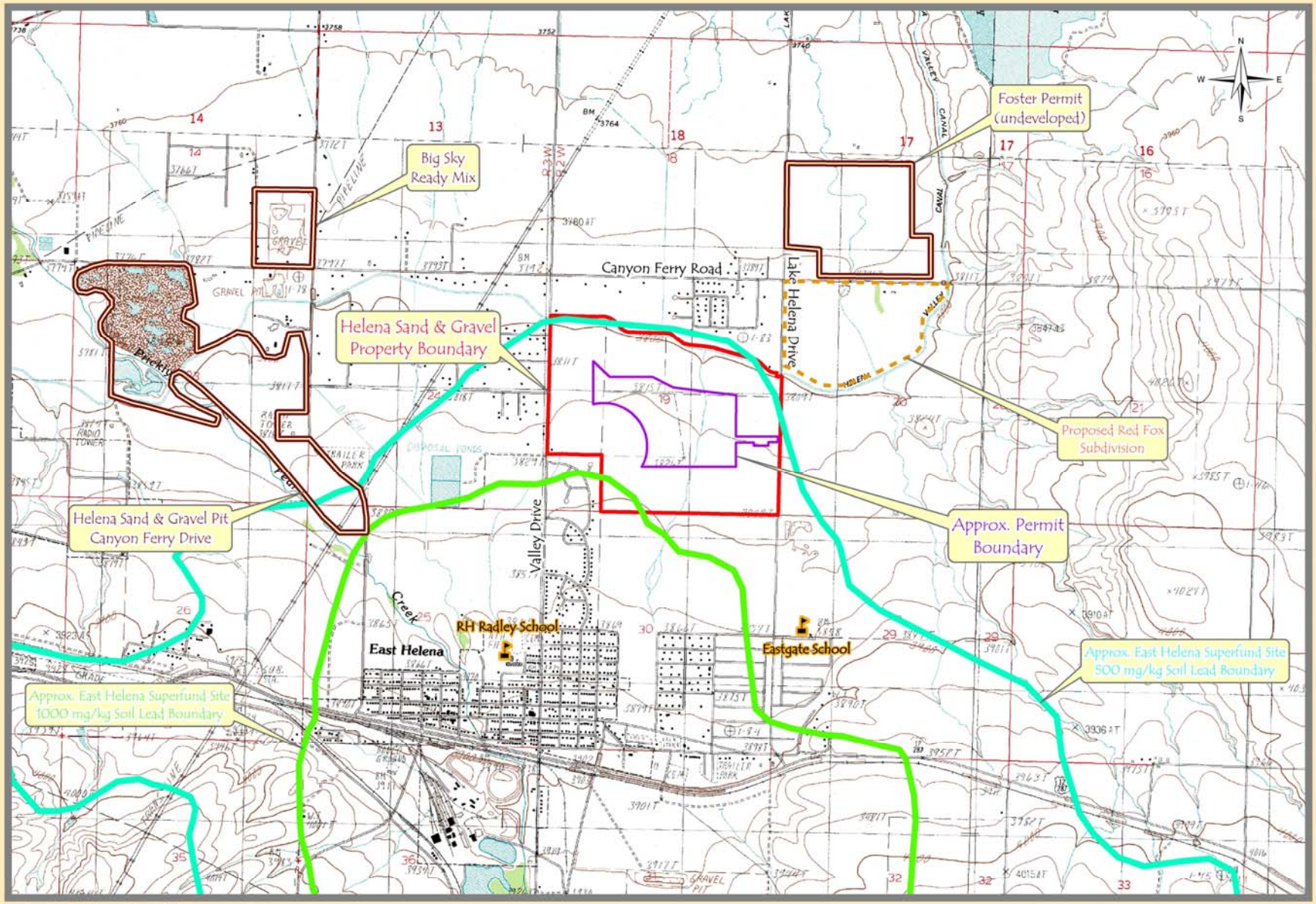
Tom Ellerhoff — MEPA Program Manager, DEQ
Name — Title

31. EA Approved By:

Signature Date
Neil Harrington, Chief, Industrial Minerals Bureau, DEQ

ATTACHMENT 1

PROJECT MAPS



Relative locations of features and boundary lines are approximate.
A field survey is recommended for precise locations.

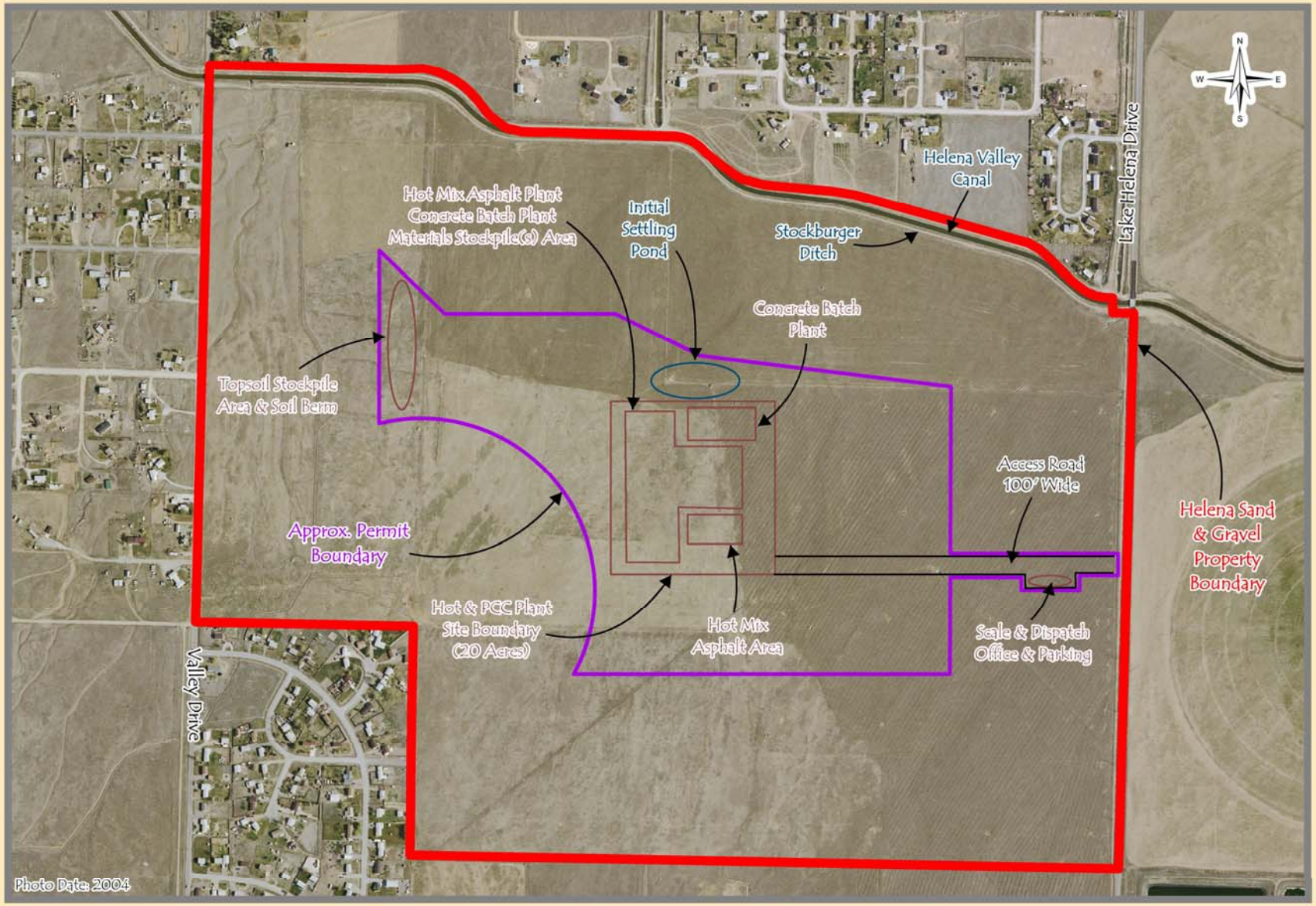
Prepared By: PBS&J 1130 Cedar Street Missoula, MT 59802

Figure 1. Vicinity Map

Proposed Lake Helena Valley Drive Pit Site

0 0.25 0.5 1 Miles

Scale: 1:36000 1 inch = 3000 feet



Relative locations of features and boundary lines are approximate.
A field survey is recommended for precise locations.

Prepared By: PBSJ 1120 Cedar Street Missoula, MT 59802

Figure 2. Site Map

Proposed Lake Helena Valley Drive Pit Site

0 500 1000 Feet

Scale: 1:9000 1 inch = 750 feet

ATTACHMENT 2

Laboratory Analytical Results

ENERGY LABORATORIES, INC. • P.O. Box 5688 • 3161 East Lyndale Ave. • Helena, MT 59604
877-472-0711 • 406-442-0711 • 406-442-0712 fax • helena@energylab.com

ANALYTICAL SUMMARY REPORT

June 27, 2006

Jim Turner
Helena Sand and Gravel Company
PO Box 5960
Helena, MT 59604

Workorder No.: H06060166

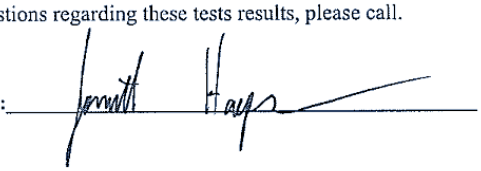
Project Name: Not on Chain of Custody

Energy Laboratories Inc received the following 2 samples from Helena Sand and Gravel Company on 6/14/2006 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H06060166-001	East Test Plot	06/14/06 16:30	06/14/06	Soil	Coarse Fragments Saturated Paste Electrical Conductivity Cations, Saturated Paste Metals by ICP, Total Saturated Paste pH Digestion, Total Metals Particle Size Analysis / Texture Prep Saturated Paste Extraction Particle Size Analysis / Texture Sodium Adsorption Ratio Saturation Percentage Particle Size Analysis / Texture
H06060166-002	Pit Top Soil	06/14/06 16:30	06/14/06	Soil	Same As Above

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative or Report.

If you have any questions regarding these tests results, please call.

Report Approved By: 

ENERGY LABORATORIES
877-472-0711 • 406-442-0711 • 406-442-0712 fax • helena@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Helena Sand and Gravel Company
Project: Not on Chain of Custody
Workorder: H06060166

Report Date: 06/27/06
Date Received: 06/14/06

		Analysis		pH-SatPst	COND	Percent Sat	SAR	Ca-SatPst	Mg-SatPst	Na-SatPst	Coarse Frags	Sand	Silt	Clay
		Units		s_u_	mmhos/cm	%	unitless	meq/l	meq/l	meq/l	%	%	%	%
Sample ID	Client Sample ID	Up	Low	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
H06060166-001	East Test Plot	0	0	7.0	0.51	57.8	0.44	4.19	1.46	0.74	25	32	40	28
H06060166-002	Pit Top Soil			7.0	7.46	53.3	7.0	32.7	7.28	31.4	26	51	25	24

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877-472-0711 • 406-442-0711 • 406-442-0712 fax • helena@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Helena Sand and Gravel Company
Project: Not on Chain of Custody
Workorder: H06060166

Report Date: 06/27/06
Date Received: 06/14/06

		Analysis		Texture	As-T	Cd-T	Pb-T
		Units		unitless	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID	Up	Low	Results	Results	Results	Results
H06060166-001	East Test Piot	0	0	CL	19	4	81
H06060166-002	Pit Top Soil			SCL	22	3	120